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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,773	10/11/2000	Timothy L. Racette	99556466	5174

7590 07/08/2003

THOMAS R. STIEBEL, JR.
MAYER, BROWN & PLATT
P.O. Box 2828
Chicago, IL 60690-2828

EXAMINER

WINTER, GENTLE E

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 07/08/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/686,773

Applicant(s)

RACETTE ET AL.

Examiner

Gentle E. Winter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-102 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-102 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 13.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification--Withdrawn

1. The abstract of the disclosure was objected to because it exceeded 150 words. The objection is overcome with the provided abstract.

Response To Remarks

2. Applicant's remarks are unremarkable and fail to provide the substance of the interview of May 9, 2003 that resulted in an agreement to withdraw the pending art based rejection. As such the art rejections will not be withdrawn at this time. Such arguments are critical to an acceptable understanding of what applicant intends the terms in the claims mean. This explanation is essential to narrow the claims and distinguish them over the prior art of record.

Commentary on Interview of May 9, 2003 and

Reasons for Withdrawal of Pending Art Rejections

3. Applicant's amendments in conjunction with the representations made in the interview of May 9, 2003 seemingly would distinguish the present invention over the prior art of record. Unfortunately applicant failed to provide a summary of the interview. As such the record, at least for now, must be clarified here. In the interview the inventors' represented that the present invention differed from the prior art of record, in part because the prior art of record failed to teach a system wherein stains were exclusively removed by a solvent, and then the solvent was removed by *inter alia* subcritical carbon dioxide. The examiner argued that inherently the carbon dioxide would remove contaminants that were not removed by the organic solvent.

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Applicants' argued that the present invention contemplated only those stains that were not removable by the carbon dioxide. Thus patentability hinged on the interaction between the substrate, the stain, and the solvent. The term "substantially" was agreed to because the inventors suggested that some of the substrate might be abraded. Applicants' were very clear, and emphatic, that the cleaning was accomplished *exclusively* by the "organic solvent". This distinction is absolutely critical to any finding of patentability because such a system would seemingly allow for the separation of the liquid carbon dioxide from the organic solvent without converting the carbon dioxide to its gaseous form. This insolubility is absolutely central to the invention. The invention is not considered to be patentable if the carbon dioxide takes part in the cleaning (as is disclosed in the specification and the prior art of record), rather, the organic solvent must be the *sole and exclusive* agent used in *all* cleaning. Seemingly, the only way this can occur is if the "organic solvent", exclusively and completely removes -- and holds -- all the soiling contaminants. The carbon dioxide cannot contribute in *any meaningful way* to the cleaning process. Why statements to this effect were not included in the Office action response and why 44 new claims were added is not clear.

4. Further, applicant should provide a clear statement as to exactly what applicant means by "substantially" since this was at the center of the discussion that resulted in initial agreement that the instant invention was distinguishable over the prior art of record of the pending art rejections, during the interview of May 9, 2003. By not including such a definition the only source of the meaning originates with this examiner. For the sake of a complete record applicant must make explicit the arguments advanced to this examiner during the May 9, 2003 interview, as they

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relate to claim construction. Applicant indicated how and why the claims differed from the prior art of record during the interview, at the time the arguments were deemed persuasive at least with respect to the prior art of record which constituted the pending rejection(s), applicant must put these reasons on the record.

5. The failure to provide the requisite claim construction, in absolutely unambiguous terms, meaningfully alters the substance of the amendments. At this time applicant shall provide an explicit explanation, on the record, as to exactly why the claims are being amended, how the amendments narrow the claims, what is meant by the amendments, and how the amendments distinguish the claims from the prior art of record.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 5,370,742 ('742) to Mitchell and United States Patent No. 5,683,977 ('977) to Jureller et al.

7. The '742 reference discloses the steps of contacting a substrate (fabric) with *inter alia* an organic solvent. Thereafter the organic solvent is removed with the aid of liquid carbon dioxide

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the pressure is disclosed to range between 65 and 75 atm. The '742 reference explicitly states that if the organic solvent are added to the bulk solution of densified carbon dioxide the stain removal process can be impeded. See e.g. column 4, line *et seq.* What is apparently not explicitly disclosed are all the claimed solvents, which are extracted with the carbon dioxide. The '997 reference discloses the various silo/organic solvents currently claimed. See specifically columns 5-16. The artisan would have motivated to make the instant combination for the reasons explicitly set forth is '742, namely to avoid impeding the cleaning action. It is noted that the solvents would be selected for the reasons set forth as well, namely their compatibility with liquid carbon dioxide. Absent such compatibility the organic solvents are disclosed to potentially adhere to the substrate.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-102 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,866,005 ('005) to DeSimone et al. It is noted that claim 1 is drawn to a process for cleaning substrates comprising cleaning the substrate with an organic solvent, in the absence of carbon dioxide and then removing the organic solvent with liquid carbon dioxide. The '005 reference, at column 1, line 20 *et seq.*, discloses that prior art systems used liquid carbon dioxide to remove oils from substrates. The oil, even if not intended as cleaners would have the effect of

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dissolving oil soluble matter, and the subsequent dissolution of the oil in liquid carbon dioxide would thus remove the oil, lacking here is the specific disclosure of the organic solvent. At column 3, line 19-41 '005 discloses *inter alia* the diethyl ether of the present invention, and goes on to state "the co-solvent or modifier can be used prior to, during, or after the substrate is contacted by the carbon dioxide fluid. Columns 3-though 18 disclose the various organic/silo-organic solvents.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-102 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the cited pages and the application generally does not appear indicate that the inventors possessed the claimed invention at the time the applicant was filed. There is no recitation supporting the proposition that "substantially all of a contaminant" is removed with the organic solvent. Because this particular limitation, asserted to be part of the invention by the applicant's and going to the very essence of the potential reasons for indicating allowable subject matter, this limitation, or an equivalent teaching, which shows this concept, will need to be shown to have been present in the application as originally filed.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

11. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

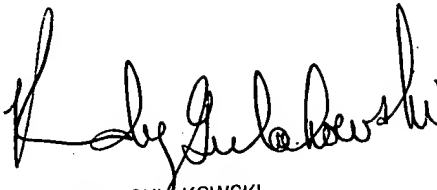
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter
Examiner
Art Unit 1746

July 3, 2003



RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700